First announcement
16th Swiss Geoscience Meeting

Bern, 30th November – 1st December 2018

A Habitable Planet

www.geoscience-meeting.ch/sgm2018
The Institute of Geography and the Institute of Geological Sciences of the University of Bern, as well as the Platform Geosciences of the Swiss Academy of Sciences (SCNAT) cordially invite you to participate in the 16th Swiss Geoscience Meeting to be held on Friday, November 30th and Saturday, December 1st, 2018 in Bern.

On Friday 30th,

The theme of the 16th SGM Plenary Session is “A Habitable Planet”.

One of the most fundamental and fascinating questions in science is why there is life on Earth. What makes our planet habitable and what is, for example, the role of plate tectonics in planetary habitability. Geoscientists not only play a crucial role in studying the evolution of planet Earth and the origins of life, but their studies can also contribute to maintaining our planet habitable and liveable for future generations.

We have invited four keynote speakers to discuss various topics related to “A Habitable Planet”.

Bernard Marty (Université de Lorraine, Nancy) will present his ideas on the origin and early evolution of the Earth’s atmosphere. Recent advances in space missions (e.g., Rosetta) and in the geochemistry of ancient rocks permit to have insights into the origin of atmospheric/oceanic volatiles, such as water, nitrogen, noble gases, and into the composition of the atmosphere during the first half of Earth’s history. Lindsay Stringer from the University of Leeds (Sustainability Research Institute, University of Leeds) will talk about land degradation and desertification, whereas Kathryn Goodenough (British Geological Survey) will discuss rare earth elements in the context of demand and global resources, and will consider challenges for future generations. The plenary session will conclude with a presentation by Ben Marzeion (University of Bremen), who will evaluate the influence of glacier melting on sea-level rise and discuss its consequences.

On Saturday 1st,

A series of 23 scientific symposia will cover the diverse spectrum of current research in geosciences, encompassing the lithosphere, the hydrosphere, the cryosphere, the biosphere, the atmosphere and the anthroposphere.

The SGM also provides the ideal environment to foster informal contacts and discussions among scientists, in particular during the Swiss Geoscience Party on Friday evening but also at the poster sessions in the main hall of the venue on Saturday. Two poster sessions are scheduled with the authors will be present for active discussion and feedback.

CONTRIBUTIONS:
Deadline for abstract submission is Wednesday August 31st, 2018.
Depending on the number and subject of abstracts submitted, proposed sessions may be merged or new ones created. Abstracts will be initially assigned to the session indicated by the authors at the time of abstract submission. Abstracts should be submitted electronically following the instructions on the SGM2018 website: https://geoscience-meeting.ch/sgm2018

REGISTRATION:
Deadline for registration is Friday October 31st, 2018.
Registration should be done electronically following the instructions on the SGM2018 website.
Registration fee is SFr. 75.- (SFr. 45.- for students/PhD students).
An extra SFr 20.- is charged for the Geoscience Party.
Onsite registrations will be charged an extra CHF 30.-
SYMPOSIA at SGM 2018:
We kindly invite you to submit abstracts for oral presentations or posters addressing the following subjects:

1. Structural Geology, Tectonics and Geodynamics
2. Mineralogy, Petrology, Geochemistry
3. Non-traditional stable isotope geochemistry: development and applications
4. Gemmology
5. Palaeontology
6. Stratigraphy
7. Seismic Hazard and Risk in Switzerland: From Science to Mitigation
8. Earthquakes from the field to the laboratory
10. Celebrating 50 Years of International Ocean Drilling (1968-2018)
11. Quaternary environments: landscapes, climate, ecosystems and human activity during the past 2.6 million years
12. Geomorphology for a habitable planet
13. Cryospheric Sciences
14. Hydrology, Limnology and Hydrogeology
15. The new Climate Change Scenarios CH2018
16. Climate Change Education and Outreach
17. Aerosols and clouds in a changing world
18. Atmospheric Processes and Interactions with the Biosphere
19. Environmental Biogeochemistry of Trace Elements
20. Remote Sensing of the Spheres
21. Geoscience and Geoinformation - From data acquisition to modelling and visualisation
22. Human Geographies
23. Sustainable social-ecological systems: from local to global challenges

Detailed information on this venue can be found on:
https://geoscience-meeting.ch/sgm2018

Looking forward to seeing you in Bern!
The SGM 2018 Organizing Committee
Aletsch Glacier

The Aletsch Glacier in Switzerland with a length of 23 km and a surface area of ca. 80 km² is the largest glacier in Europe. Originating at the upper slopes of the Eiger, Mönch and Jungfrau in the Bernese Oberland, the glacier flows down into the Valais. Like most glaciers worldwide the Aletsch Glacier is retreating in response to global warming, having lost well over 3 km of its length since 1870. The retreat of the glacier causes major slope instabilities.

On the southeastern slopes of the Aletsch Glacier near Moosfluh a huge rock mass (c. 150 million m³) is actively moving downslope towards the glacier. In the fall of 2016 the rock mass at Moosfluh moved at a velocity of up to 80 cm/day and cracks of several hundred meters in length and up to tens of meters in depth opened on the upper parts of the slope. Pre-existing tectonic structures, such as Alpine shear zones and exfoliation joints in the gneisses making up the slopes at Moosfluh, contribute to the slope instabilities.

The mass movement at Moosfluh is the subject of several ongoing field-based studies and is being permanently monitored by stationary time-lapse cameras, satellite synthetic aperture radar interferometry, differential GPS, airborne digital photogrammetry, and a local seismic network.

Photo credit: Guido Schreurs

Earthrise

Fifty years ago, in December of 1968, the Apollo 8 crew flew from the Earth to the Moon and back again. Frank Borman, James Lovell, and William Anders were launched atop a Saturn V rocket on December 21, circled the Moon ten times in their command module, and returned to Earth on December 27.

The Apollo 8 mission’s impressive list of firsts includes: the first humans to journey to the Earth’s Moon, the first to fly using the Saturn V rocket, and the first to photograph the Earth from deep space. As the Apollo 8 command module rounded the farside of the Moon, the crew could look toward the lunar horizon and see the Earth appear to rise, due to their spacecraft’s orbital motion.

Their famous picture of a distant blue Earth above the Moon’s limb was a marvelous gift to the world.

Photo credit: Apollo 8, NASA